DETAILED ACTION

Claims 1, 4-6, 14-20 and 34-40 are pending. New claims 39 and 40 were added in the amendment filed 2/03/2010. Claims 36-38 and 40 are drawn to non-elected species.

Claims 1, 4-6, 14-20, 34, 35 and 39 are currently under examination.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1, 4-6, 14-20, 34 and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Maclaren et al. (Chemical thinning of radiate pine, 1999) in view of Hacker et al. (US 2001/0031704).

Applicant's Invention

Applicant claims a method of treating coniferous plants by applying carfentrazone and a combination of imazapyr and carfentrazone. Claim 14 and 34 specify the application of carfentrazone and/or imazapyr is during site preparation (pre-emergence). Claim 15 specifies the ratio of A:B is from 1:5 to 200:1. Claim 16 specifies imazapyr is applied in amounts from 100 to 1400 g/ha. Claim 17 specifies carfentrazone is applied in amounts from 10 to 500 g/ha. Claim 18 and 35 specify application of carfentrazone

and/or imazapyr is after emergence of the coniferous plants. Claims 19, 20 and 39 limit the coniferous plants to those belonging to the Pinaceae family and species of Pinus.

Determination of the scope and the content of the prior art

(MPEP 2141.01)

Maclaren et al. teach the use of imazapyr for the removal of undesirable Pinus tree species, specifically radiata pine (abstract; page 1, column 2).

Ascertainment of the difference between the prior art and the claims

(MPEP 2141.02)

Maclaren et al. do not teach treating coniferous plants with carfentrazone. It is for this reason that Hacker et al. is joined.

Hacker et al. disclose herbicide combination A+B where A is selected from imidazolinones, such as imazapyr and B is one or more herbicides including carfentrazone (abstract; [0126]). Preferably, the application rate of a herbicide A is 10-800 g a.s./ha and herbicide B is 1-150 g a.s./ha ([0063] and [0200]). Application can take place pre-emergence or post emergence [0271]. Hacker et al. teach that herbicide A in combination with herbicide B interact and allow synergistically increased effects that are unexpected when individual herbicides A and B are used alone [0026]. Although Hacker et al. focus on the use of the formulation to treat rice Herbicides A and B are taught as a foliar-acting herbicides [0046] and [0080]. Additionally, the composition are taught to be used against a broad spectrum of monocotyledonous and dicotyledonous as well as undesired plants that produce rhizomes, rootstocks or other perennial organs which are difficult to control [0271].

Finding of prima facie obviousness

Rationale and Motivation (MPEP 2142-2143)

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of Maclaren et al. and Hacker et al. to further include treating coniferous plants of the Pinaceae family with carfentrazone. One would have been motivated to include treating coniferous plants with carfentrazone because Hacker et al. teach the imazapyr and carfentrazone in combination allow synergistically increased effects that are unexpected when individually used alone. Therefore, one of ordinary skill in the art would have been motivated to utilize carfentrazone in combination with imazapyr for controlling coniferous plants. Furthermore, utilizing carfentrazone on coniferous plants would have a high predictability of success because Hacker et al. teach that carfentrazone and imazapyr are foliar-acting herbicides which attack rootstocks. Hence, utilizing carfentrazone one of ordinary skill would have been able to attack the foliage and roots of coniferous plants in order to control plant growth.

Response to Arguments

Applicant's arguments filed 2/03/2010 have been fully considered but they are not persuasive.

Applicants argue that Maclaren concludes that chemical thinning was mostly unsuccessful in destroying trees within a reasonable period of time. The Examiner is not convinced by this argument. Maclaren concludes that removal of wildlings by

mechanical means is not always easy in rocky terrain. Hence, Maclaren concludes that it is possible that chemical thinning could achieve higher mortality rates than slashers and chainsaws at a lower cost (page 22, column 2, paragraph 3). Since a specific reasonable period of time is not specified in the present claims, the teachings of Maclaren render the use of chemical thinners, including imazapyr, obvious to one skilled in the art.

Applicants argue that Maclaren does not mention PPO-inhibitors, such as carfentrazone, which has a different mode of action. Hence, Applicants believe herbicides of a different mode would not work at all. The Examiner is not convinced by this argument because chemical thinning agents disclosed by Maclaren include various herbicides having different modes of action including, photosynthetic inhibitors, hexazinone and amino inhibitors, picloram amine (page 19, column 2, paragraph 1). Hence, selected herbicides with different modes of actions would have been obvious in view of the teachings of Maclaren.

Applicants argue that Maclaren does not disclose that the treatment is successful and that one of ordinary skill would be taught away from using chemical thinning to control coniferous growth. The Examiner is not convinced by this argument because Maclaren teaches that a 95% kill rate may be sufficient for silvicultural purposes, but may be unacceptable for aesthetic reasons (page 19, column 2, paragraph 3). Hence, one is not taught away from the use of chemical thinners since a 95% kill rate shows the method to be successful.

Applicants argue Hacker is directed to controlling rice plants, not coniferous plants, hence the combination is improper. The Examiner in not convinced by this argument because Hacker is joined to show why the combination of carfentrazone with imazapyr would have been obvious. It is the combination of Maclaren and Hacker that is at issue, not Hacker alone. It is well known in view of *KSR International Co. v. Teleflex Inc.*, 550 U.S, 82 USPQ2d at 1396 that known manipulation in one field of endeavor may prompt variations of it for use in either the same field based on design incentives or other market forces if the variations are predictable. Since the combination of imazapyr and carfentrazone is known to yield synergistic results, it would have been obvious to one of ordinary skill in the art to utilize the teachings of Hacker in a method of controlling conifers.

Applicant further argues that Hacker teaches herbicides having foliar action and hence related to plants with larger leaves, whereas conifers do not have leaves but needles. The Examiner is not convinced by this argument because it is well known that conifers have needle shaped leaves. Furthermore, Hacker does not specify that the leaves be large. Hence, it would have been obvious to utilize foliar acting herbicides in order to control coniferous plant growth.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Danielle Sullivan whose

telephone number is (571) 270-3285. The examiner can normally be reached on 7:30 AM - 5:00 PM Mon-Thur EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Johann Richter can be reached on (571) 272-0646. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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